

In re Application of FRIES
Serial No. 09/895,452

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REMARKS

The Office action has been carefully considered. The Office action rejected claims 40 and 41 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,973,681 to Tanigawa et al. (hereinafter "Tanigawa"). By the present amendment, the specification has been amended to update now-known information regarding the parent patent, claim 40 has been amended, and new claims 47-63 have been added. Reconsideration is respectfully requested in view of the following remarks.

The present invention is generally directed towards injecting pages of content into audiovisual data transmitted from a head end to subscribers. The pages are placed in a carousel or the like such that they are transmitted one at a time in a substantially recurring pattern.

The subscriber chooses a page (or one may be initially chosen by default or another mechanism), and then waits for that page to be received. When the chosen page is received, it is displayed, along with links corresponding to metadata also received in association with that page, whereby the user may interact with the page, including selecting a link to select another page, and so on. As each page is individually transmitted in the pattern, the user has to wait for a desired page to be received before it can be captured and displayed. Depending on a number of factors, such as the total number of pages in the pattern, the amount of bandwidth used for content pages versus sending conventional television and audio programming, there may be a considerable latency as the receiver needs to wait for a desired page to be received before it

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can be displayed. For example, if a pattern takes eight seconds to be transmitted, a subscriber may have to wait as long as eight seconds to see a desired page if the page was received but replaced by another just before the subscriber requested it. Given random selection times as is typical when browsing content pages, the average latency would be four seconds in such an example system.

To reduce the maximum (and average) latency, at least one additional instance of a given page may be placed in the carousel / injected in the pattern, typically (but not necessarily) in a manner such that the instances are spaced apart. Thus, to use an example from the present specification, a page that is deemed important such as a service home page may be placed in an eight-second carousel / pattern four times, providing a maximum latency of approximately two seconds for that page (and a random-selection average of one second) if spaced apart substantially equally.

Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which speak for themselves.

Tanigawa is generally directed towards a system in which multiple pages of content are transmitted in a single transmission cycle. See Tanigawa, FIGS. 11A and 11B and accompanying text. However, in contrast to the present invention, Tanigawa never considers placing multiple instances of the same page within a transmission cycle for the purpose of reducing maximum latency.

Instead, Tanigawa specifically teaches that it is necessary to wait the maximum transmission cycle if the user has just missed desired image data.

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See Tanigawa column 4, lines 48-55: "As a result, the receiving apparatus will always be able to switch the image data within a fixed response time, which at most will be the time taken by one transmission cycle." Thus, in Tanigawa the maximum latency is a full transmission cycle's time, (presumably with a random-selection average latency of half of that).

Moreover, although Tanigawa does not directly identify the length of a transmission cycle, other teachings of Tanigawa are consistent with the fact that Tanigawa never contemplated reducing latency, because Tanigawa's image transmission rate appears to be very fast (at the frame rate of conventional television images, e.g., sixty frames per second):

The multiplexing unit 115 multiplexes the display image information (including the audio information) and the link information read by the transmission data reading unit 114, and outputs multiplexed data to the transmitting unit 116. Here, this multiplexing can be performed using the same method as conventional teletext broadcasting. In such a case, display image information and audio information are multiplexed in the same way as the images and audio included in conventional TV broadcasts, while link information is multiplexed in the same way as the text information multiplexed with teletext broadcasts. This in to say, when no audio information is present, *the display image information is transmitted in the image section of one frame of the television image signal, while the link information is transmitted in the retrace section of the same one frame of the television image signal.*

Tanigawa, column 19, lines 7-21 (*emphasis added*).

In fact, Tanigawa specifically teaches the concept of freezing the image data (in order to match audio) that is transmitted, effectively *increasing* latency

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between pages (and temporarily "stopping the carousel" to the extent that Tanigawa could be considered as having one):

When audio information is present, the audio information is transmitted as the television audio signal, while the corresponding display image information and link information are transmitted in the image area and retrace area, respectively, of the television image signal *for the number of frames required by the reproduction of the audio information*;

Tanigawa, column 19, lines 21-28 (*emphasis added*).

Indeed, if a user of Tanigawa's system had not selected this particular image / link / audio, the user would still have to wait that number of frames until the audio (with identical image and link) transmissions completed, even though the user would not even hear that audio.

Each of the independent claims is generally directed, at least in part, towards reducing latency in content transmission. Tanigawa is silent as to such a concept, and in fact teaches away from reducing latency, as discussed above.


By law, an anticipation rejection under 35 U.S.C. § 102 requires the disclosure in a single prior art reference of each and every element of the claim under consideration, and each element must be arranged as in the claim. As such, applicant submits that the §102 rejections of the claims based on Tanigawa cannot be reasonably supported. Reconsideration and withdrawal of the rejections in the Office action is respectfully requested, and timely allowance of this application is earnestly solicited.

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CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that claims 40,41 and 47-63 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.



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